

## Product Information

# Anti-Cytokeratin, Pan Antibody, Mouse Monoclonal

Clone PCK-26, purified from hybridoma cell culture

**C5992****Product Description**

Anti-Cytokeratin (mouse IgG1 isotype) is derived from the PCK-26 hybridoma produced by the fusion of mouse myeloma cells and splenocytes from BALB/c mice immunized with a cytokeratin preparation from human epidermis. The isotype is determined using a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents, Catalog Number ISO2.

Anti-Cytokeratin recognizes an epitope located on the type II cytokeratins 1, 5, 6, and 8 by immunoblotting.<sup>1</sup> The PCK-26 clone produces a broad spectrum antibody which reacts specifically with a wide variety of normal, reactive and neoplastic epithelial tissues. The antibody reacts with simple, cornifying, and non-cornifying squamous epithelia and pseudostratified epithelia. It does not react with nonepithelial normal human tissues. This antibody can be applied to methanol- or acetone-fixed frozen sections, and to protease-digested, formalin-fixed, paraffin-embedded human tissues. Similarly, embedded methacarn-fixed material is also suitable for cytokeratin demonstration. This antibody cross reacts with cytokeratins from many species, e.g., human,<sup>3</sup> bovine,<sup>4</sup> goat, sheep, guinea pig, rat,<sup>5</sup> mouse,<sup>6, 7</sup> hamster, dog, cat, rabbit, chicken, viper, lizard, and carp. It may be used for the localization of cytokeratins using various immunochemical assays such as immunoblotting,<sup>4</sup> dot blotting, immunohistochemistry,<sup>3, 4</sup> and immunocytochemistry.<sup>5, 7</sup>

Intermediate-sized filaments are abundant cytoplasmic structural proteins found in most vertebrate cells. Cytokeratins, a group comprising at least 29 different proteins are characteristic of epithelial and trichocytic cells. Cytokeratin 1, 5, 6, and 8 are members of the type II neutral-to-basic subfamily. Cytokeratin peptide 1 (68 kDa) is expressed together with cytokeratin 10 in the suprabasal cell layers or the differentiation compartment of the epidermis. Its expression increases with epidermal maturation and is modified post-translationally in terminally differentiated keratinocytes of the stratum corneum. Cytokeratin peptide 5 (58 kDa) is the primary type II keratin in stratified epithelia, while cytokeratin type 8 (52 kDa) is a major type II keratin in simple epithelia. Cytokeratin 6 (56 kDa) is a "hyperproliferation" cytokeratin expressed in tissues with natural or pathological high turnover. Monoclonal antibodies to cytokeratins are specific markers of epithelial cell differentiation and have been widely used as tools in tumor identification and classification.

Anti-Pan Cytokeratin is a broadly reactive group-type antibody, which recognizes an epitope present in most human epithelial tissues. It facilitates the typing of normal, metaplastic, and neoplastic cells and may aid in the discrimination of carcinomas and non-epithelial tumors such as sarcomas, lymphomas, and neural tumors. It is also useful in detecting micrometastases in lymph nodes and other tissues, and for determining the origin of poorly differentiated tumors.<sup>1, 2</sup>

## Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide.

Antibody concentration: ~1.5 mg/mL

## Precautions and Disclaimer

For R&D use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

## Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

## Product Profile

### Immunohistochemistry

A working concentration of 10-20 µg/mL is recommended using human placenta or skin.

**Note:** In order to obtain the best results using various techniques and preparations, we recommend determining optimal working dilutions by titration.

## References

1. Moll, R., et al, *Cell*, **31**, 11-24 (1982).
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3. Arora, P.D., et al., *J. Biol. Chem.*, **271**, 20516-20523 (1996).
4. Rusu, D., et al., *BMC Cell Biol.*, **6**, 42-54 (2005).
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6. Kalinichenko, V.V., et al., *J. Biol. Chem.*, **277**, 12369-12374 (2002).
7. Harman, B.C., et al., *J. Immunol.*, **170**, 1299-1303 (2003).

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